

OIPE

**RAW SEQUENCE LISTING**  
PATENT APPLICATION: US/09/853,257

DATE: 05/31/2001  
TIME: 15:49:32

Input Set : A:\PUNIV002A.TXT  
Output Set: C:\CRF3\05312001\I853257.raw

4 <110> APPLICANT: Bonnie L. Bassler  
5 Brendan N. Lilley  
6  
7 <120> TITLE OF INVENTION: LUXO-SIGMA54 INTERACTIONS AND METHODS OF  
8 USE  
9  
10 <130> FILE REFERENCE: PUNIV.002A  
11  
12 <140> CURRENT APPLICATION NUMBER: US/09/853,257  
13 <141> CURRENT FILING DATE: 2001-05-10  
14 <150> PRIOR APPLICATION NUMBER: 60/202,999  
15 <151> PRIOR FILING DATE: 2000-05-10  
16 <160> NUMBER OF SEQ ID NOS: 9  
17 <170> SOFTWARE: FastSEQ for Windows Version 4.0  
18  
19 <210> SEQ ID NO: 1  
20 <211> LENGTH: 4003  
21 <212> TYPE: DNA  
22 <213> ORGANISM: Vibrio harveyi  
23 <400> SEQUENCE: 1  
24 agtcacgggt cttcatttgc catacggaa ttccatatac agcacatacg caccagtgcg 60  
25 ggtatggcac tattttgtgg tgaacggc cgttagaaa ttgtctgtgc attggcagca 120  
26 aaccctcagt tcattttgtt ggatgaaccg ttccgggtg ttgacccat ttccgttaac 180  
27 gacatcaaaa aaatcatcga acacttgcg gatcggggcc ttggcggtt aatcacagac 240  
28 cataacgtac gggaaacctt ggacgttgtt gaaaaaggct atatcgtaag ccaaggac 300  
29 ctcatcgcat cggaaactcc ggatgaagtt ctaataacg agcaagtggaa acaagtttat 360  
30 ctcggcgaac aattccgtct atgattacat taggaacgggt aagattctga gcattacaag 420  
31 gtaagaaca ctgaatgaaa ctttcattac aactcaacgt aggtcaacag ttagccatga 480  
32 cgccacacgt gcagcaagcg attcggttgc tgcaattgtc gacgctcgat cttcaacaag 540  
33 aaatccaaga agcggtggac tccaaccgc tactggaaat tgaagaaggc cacatggac 600  
34 ctcagcaaaa tggtaagac aaatcagcgt ctgaatctgc tgataaaaat gcaacgaag 660  
35 ctaacgatgc ctcagaaccc gaccttccag atagctcaga cgtgatggaa aaatctgaaa 720  
36 tcaacgatgc gcttagaaatt gataccactt gggatgacgt atatgcgc aacacggca 780  
37 tcagctctga gcttagaaatt gataccactt gggatgacgt atatgcgc aacacggca 840  
38 gacaggcct agcgctggat gatgacatgc cgtctacca aggtgagacc actgaatctt 900  
39 tgcattgtt ctttatgtgg cagttagact taacgcctt cgtgaaacc gaccgcacca 960  
40 tgccttcgc qattatcgat ggggtcgacg actacggcta cttaaccta tccctgtaa 1020  
41 aaattcacga gagttcgac aacgaagaag tggaaatggg tgaagttggaa ggggtacgta 1080  
42 agcgattca gcaatttgac cggctcggt tagctctcg caatctgc aatgcctac 1140  
43 tgctacaact ggcacatttc cttgaagaca cggcgtggct tgcgtggcc aaaatgggt 1200  
44 tgagcgatca catggaccac cttggcaatc gtgactacaa gtcgttgc aacagggtca 1260  
45 agcttaaaga agcgacttgc cgtgaagttat tgaagttgtat tcaacaactt gacccacgtc 1320  
46 caggtagtcg tattcacaccc gatgacactg aatacgcatc tccggatgtc tccgtatcta 1380  
47 aatgtcaat gatgtggcc gtcgtccataa accctgacag cattccgaaa ctaaaagttaa 1440  
48 atcaacaata tgcgtcaacta ggcuaaggca acagtggggaa tggccgttgc aatcgatgtca 1500  
49 atttgcgaaatgg ggcggaaatgg ctgatttgc gcttagaaatgg cggatggcc aacggatggc 1560  
50 aaatgcgaaatggatgttgc gatgatccaaatggatgttgc gatgtatgtt gatgtatgtt 1620  
51 tggatgttgc gatgtatgttgc tggatgttgc gatgtatgtt gatgtatgtt 1680  
52 tgcgtgtac aacacggaaatgg tttatgcata ccccaatgtgg cattttgttgc aatcgatgtca 1740  
53 tccatgttagt acagatgttgc gttggatgttgc ttcgtccaca gcaattcgcc 1800  
54 cactcatcaa aaatgttgc gtcgtgttgc gatgtatgtt gatgtatgtt 1860  
55 ttgtgtgttgc cagggttgc aatgttgc gatgtatgtt gatgtatgtt 1920

ENTERED

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107 Ala Ser Glu Ser Ala Asp Lys Ser Ala Asn Glu Ala Asn Asp Ala Ser  
 108 65 70 75 80  
 109 Glu Pro Asp Leu Pro Asp Ser Ser Asp Val Ile Glu Lys Ser Glu Ile  
 110 85 90 95  
 111 Ser Ser Glu Leu Glu Ile Asp Thr Thr Trp Asp Asp Val Tyr Ser Ala  
 112 100 105 110  
 113 Asn Thr Gly Ser Thr Gly Leu Ala Leu Asp Asp Asp Met Pro Val Tyr  
 114 115 120 125  
 115 Gln Gly Glu Thr Thr Glu Ser Leu His Asp Tyr Leu Met Trp Gln Leu  
 116 130 135 140  
 117 Asp Leu Thr Pro Phe Ser Glu Thr Asp Arg Thr Ile Ala Leu Ala Ile  
 118 145 150 155 160  
 119 Ile Asp Ala Val Asp Asp Tyr Gly Tyr Leu Thr Leu Ser Pro Glu Glu  
 120 165 170 175  
 121 Ile His Glu Ser Phe Asp Asn Glu Glu Val Glu Leu Asp Glu Val Glu  
 122 180 185 190  
 123 Ala Val Arg Lys Arg Ile Gln Gln Phe Asp Pro Leu Gly Val Ala Ser  
 124 195 200 205  
 125 Arg Asn Leu Gln Glu Cys Leu Leu Leu Gln Leu Ala Thr Phe Pro Glu  
 126 210 215 220  
 127 Asp Thr Pro Trp Leu Ala Glu Ala Lys Met Val Leu Ser Asp His Ile  
 128 225 230 235 240  
 129 Asp His Leu Gly Asn Arg Asp Tyr Lys Leu Val Ile Lys Glu Ala Lys  
 130 245 250 255  
 131 Leu Lys Glu Ala Asp Leu Arg Glu Val Leu Lys Leu Ile Gln Gln Leu  
 132 260 265 270  
 133 Asp Pro Arg Pro Gly Ser Arg Ile Thr Pro Asp Asp Thr Glu Tyr Val  
 134 275 280 285  
 135 Ile Pro Asp Val Ser Val Phe Lys Asp His Gly Lys Trp Thr Val Ser  
 136 290 295 300  
 137 Ile Asn Pro Asp Ser Ile Pro Lys Leu Lys Val Asn Gln Gln Tyr Ala  
 138 305 310 315 320  
 139 Gln Leu Gly Lys Gly Asn Ser Ala Asp Ser Gln Tyr Ile Arg Ser Asn  
 140 325 330 335  
 141 Leu Gln Glu Ala Lys Trp Leu Ile Lys Ser Leu Glu Ser Arg Asn Glu  
 142 340 345 350  
 143 Thr Leu Leu Lys Val Ala Arg Cys Ile Val Glu His Gln Gln Asp Phe  
 144 355 360 365  
 145 Phe Glu Tyr Gly Glu Glu Ala Met Lys Pro Met Val Leu Asn Asp Val  
 146 370 375 380  
 147 Ala Leu Asp Val Asp Met His Glu Ser Thr Ile Ser Arg Val Thr Thr  
 148 385 390 395 400  
 149 Gln Lys Ile Met His Thr Pro Arg Gly Ile Phe Glu Leu Lys Tyr Phe  
 150 405 410 415  
 151 Phe Ser Ser His Val Ser Thr Asp Asn Gly Gly Glu Cys Ser Ser Ile  
 152 420 425 430  
 153 Ala Ile Arg Ala Leu Ile Lys Lys Leu Val Ala Ala Glu Asn Thr Ala  
 154 435 440 445  
 155 Lys Pro Leu Ser Asp Ser Lys Ile Ala Ala Leu Leu Ala Asp Gln Gly

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156      450          455          460
157 Ile Gln Val Ala Arg Arg Thr Ile Ala Lys Tyr Arg Glu Ser Leu Gly
158 465          470          475          480
159 Ile Ala Pro Ser Ser Gln Arg Lys Arg Leu Leu
160          485          490
163 <210> SEQ ID NO: 3
164 <211> LENGTH: 476
165 <212> TYPE: DNA
166 <213> ORGANISM: Vibrio harveyi
167 <400> FEATURE: 3
168 atgadacctt cattacaact caagcttagt caacagttag ccatyacqcc acagctgcag 60
169 cuagcgatc ttgttgtca atttgtcagc ctcgatcttc aacaagaaat ccagaaggcg 120
170 ttggactca acccgtact ggaagtgtaa gaaggccacg atgagcctca agcaaatgg 180
171 gaagacaat cagcgtctga atctgtctat aaaagtgcga acgaagctaa cgatgcctca 240
172 gaaccgcacc ttcaggatag ctcagacgtt attgaaaaat ctgaaatcag ctctgagcta 300
173 gaaatttgata ccacctggga tgacgttatat agccaaaca cgggcagcac aggcttagcg 360
174 ctggatgtg acatgcctgt ctaccaaggt gagaccactg aatctttgca tgattacatt 420
175 atgttgtcgt tagacttaac gcctttcagt gaaaccgacc gcaccatcgc cctcgc 476
176 <210> SEQ ID NO: 4
177 <211> LENGTH: 6
178 <212> TYPE: PRT
179 <213> ORGANISM: Artificial Sequence
180 <214> FEATURE:
181 <223> OTHER INFORMATION: portion of consensus sequence of sigma-54 domains
182 <221> NAME/KEY: VARIANT
183 <222> LOCATION: (1)...(6)
184 <223> OTHER INFORMATION: Xaa = Trp or Phe
185 <400> SEQUENCE: 4
W--> 191 Xaa Phe Pro Gly Asn Val
192 1          5
193 <210> SEQ ID NO: 5
194 <211> LENGTH: 6
195 <212> TYPE: PRT
196 <213> ORGANISM: Artificial Sequence
197 <214> FEATURE:
198 <223> OTHER INFORMATION: portion of consensus sequence of sigma-54 domains
199 <221> NAME/KEY: VARTANT
200 <222> LOCATION: (1)...(6)
201 <223> OTHER INFORMATION: Xaa = Val, Ala, Asp, Glu, Gly
202 <400> SEQUENCE: 5
W--> 208 Glu Leu Phe Gly His Xaa
203 1          5
204 <210> SEQ ID NO: 6
205 <211> LENGTH: 2
206 <212> TYPE: PNA
207 <213> ORGANISM: Artificial Sequence
208 <214> FEATURE:
209 <223> OTHER INFORMATION: upstream primer to amplify rpoN gene
210 <400> SEQUENCE: 6

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20

221 ggycaacart tagcsatgac  
223 <210> SEQ ID NO: 7  
224 <211> LENGTH: 21  
225 <212> TYPE: DNA  
226 <213> ORGANISM: Artificial Sequence  
228 <220> FEATURE:  
229 <223> OTHER INFORMATION: downstream primer to amplify rpoN gene  
231 <400> SEQUENCE: 7  
232 catsgcgtcy tcwccatact c  
234 <210> SEQ ID NO: 8  
235 <211> LENGTH: 25  
236 <212> TYPE: DNA  
237 <213> ORGANISM: Artificial Sequence  
239 <220> FEATURE:  
240 <223> OTHER INFORMATION: upstream primer used to amplify rpoN gene  
242 <400> SEQUENCE: 8  
243 ggaacggtag aattctgagc attac  
245 <210> SEQ ID NO: 9  
246 <211> LENGTH: 28  
247 <212> TYPE: DNA  
248 <213> ORGANISM: Artificial Sequence  
250 <220> FEATURE:  
251 <223> OTHER INFORMATION: downstream primer used to amplify rpoN gene  
253 <400> SEQUENCE: 9  
254 ccttttgaat tcgtgcctaa agtaggcg  
25  
28

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**VERIFICATION SUMMARY**

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L:12 M:270 C: Current Application Number differs, Replaced Current Application No

L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date

L:191 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4

L:208 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5